

TM

SOUTHWEST KIVA 24" FIREPLACE

Prefabricated Masonry Wood Burning Firebox and Metal Frame

INSTALLATION INSTRUCTIONS AND OPERATIONS

Firebox Model

SWK24

Frame Models
(Figure 1)

SWKL24-LAGUNA

SWKS24-SANDIA

SWKH24-HOPI

SWKSH24-SHALAKO

SAVE THIS BOOK

In addition to instructions on installation and maintenance of your fireplace it contains information that will make it easier to obtain replacement parts as needed.

This fireplace is approved for use as a wood burning fireplace or for use with vented gas logs approved to ANSI Z21.60 standards.

This fireplace is to be installed ONLY by a construction industry licensed contractor, or an installer certified by Southwest KIVA Inc. Any permits required for installation should be obtained by contractor as well as any other construction industry inspections that may be required.

WARNING The information outlined in this installation manual must be adhered to by the installer and the buyer exactly, failure to do so and may cause a serious fire hazard resulting in property damage, personal injury or loss of life. It will also void the warranty.

WARNING: The glass door is tempered glass and is only used when the fireplace has been converted to burn gas ceramic logs. The door is only to be used to prevent draft, and should not be in place when burning.

Manufactured By
Southwest Firebird Manufacturing Inc.
4646 Menaul NE
Albuquerque, NM 87110

www.southwestkiva.com



LISTED
FACTORY-BUILT FIREPLACE
Test Standards UL 127

Southwest KivaTM Prefabricated Kiva Fireplaces

Figure 1

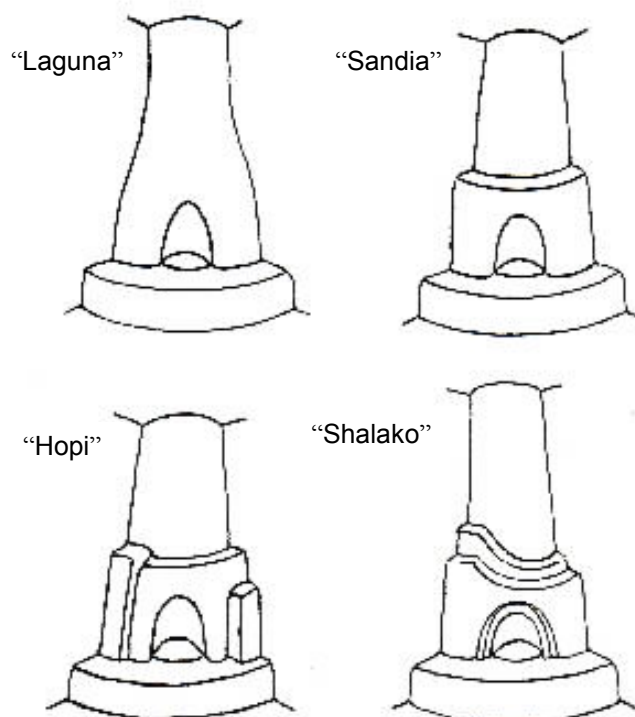


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ALL PICTURES/CHARTS RELATED TO CHIMNEY COMPONENTS ARE REPRODUCED WITH THE PERMISSION OF DESA INTERNATIONAL.

FOR YOUR SAFETY

- Do not store or use gasoline in the vicinity of this or any other appliance.
- Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
- Do not place clothing or other flammable materials on or near the appliance.
- NEVER leave children unattended when a fire is burning in the fireplace

CHECK LOCAL CODES BEFORE INSTALLING THIS FIREPLACE.

This wood burning fireplace complies with UL 127 standard as a FACTORY BUILT FIREPLACE.

Warning this fireplace has not been tested with an unvented gas log set. To reduce risk of fire or injury, do not install an unvented gas log into fireplace

I. INTRODUCTION

Before you begin installation of this fireplace, read these instructions completely.

- This fireplace and its components are safe when installed according to the installation manual. Unless Southwest Firebird Manufacturing/KIVA parts are used, which have been tested and approved for this fireplace, a firehazard may result.
- The Southwest Firebird Manufacturing/KIVA warranty will be voided and Southwest Firebird, Inc. disclaims any responsibility for the following infractions:
 1. Any modification of the fireplace, components, doors, air inlet system, or damper control.
 2. Use of any part not manufactured/approved by Southwest Firebird Manufacturing Inc.

PROPER PREPARATION prior to fireplace installation is very important to ensure safety and continuous operation. Consult the local building codes for specific requirements for your area.

WARNING: Do not install fireplace insert in this firebox unless the manufacturers instructions with the insert specifically state the Southwest Kiva fireplace has been tested for the insert.

SELECTING A LOCATION

To determine the safest and most efficient location for the fireplace the following guidelines must be taken into consideration.

1. The location must allow for proper clearances (See Pages 5 & 7).
2. The location of the fireplace should not be affected by drafts, air conditioning ducts, windows or doors.
3. A location where the cutting of joists, or roof rafters can be avoided.
4. The required outside air kit can be easily installed (See Page 6).

II. FIREBOX INSTALLATION

When installing the firebox, it must be placed on a level non-combustible surface. If the existing floor surface is wood, vinyl or any combustible material, the flooring needs to be protected with ½" x 4'6"x 4'6" masonry board to the full dimension of the frame/cage (if used). A minimum of 18" clearance from the firebox opening to any combustible is required.

A. FRAME LAYOUT (if used) AND FIREBOX BASE PEDESTAL PLACEMENT

In the corner, where the fireplace is to be installed, measure out along adjacent wall the appropriate distance as shown in (Chart A, Row C). Do the same on the opposite wall. Draw a line on the floor with chalk or pencil to create the arch radius of the hearth/banco. Repeat the procedure for firebox radius (Chart A, Row A). See Figure 2.

If any carpeting and/or padding is present, it should be re-
the hearth/banco.

moved to the radius of

Chart A

Frame Style:	Laguna	Sandia	Hopi	Shalako
A	36"	42"	42"	48"
B	18"	18"	18"	18"
C	54"	60"	60"	66"
D	32"	35"	35"	35"

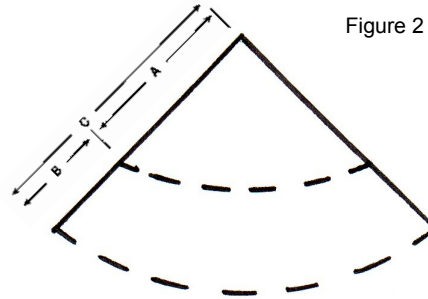


Figure 2

To find the centerline, draw a straight line out from walls at firebox radius (Chart A, Row A). See Figure 3.

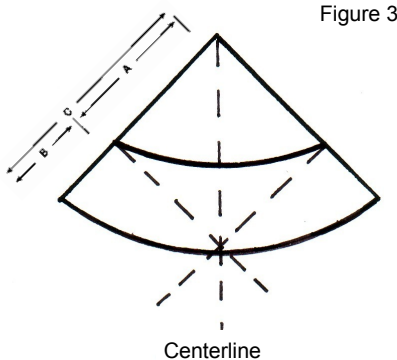


Figure 3

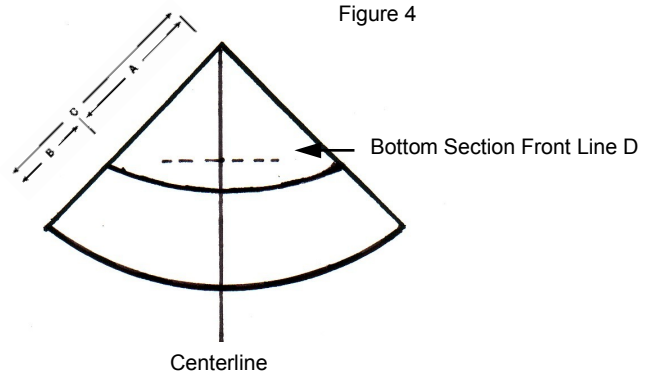
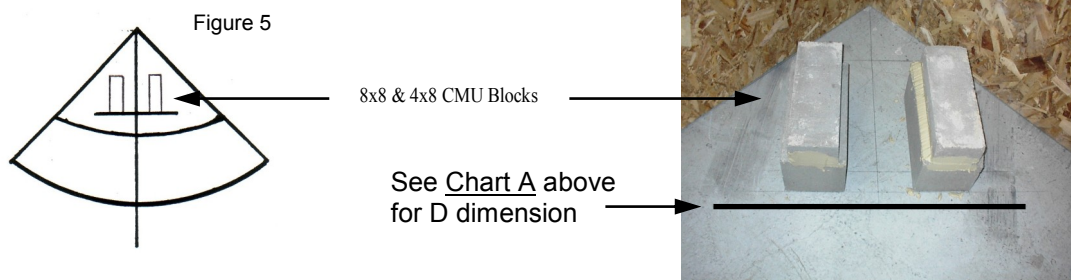


Figure 4

To place the front of firebox bottom section, make a mark on the centerline out from the corner according to Chart A, Row D (example: Laguna = 32"). With a carpenter's square draw a perpendicular line 1 foot out from this mark on both sides of the line. See Figure 4.

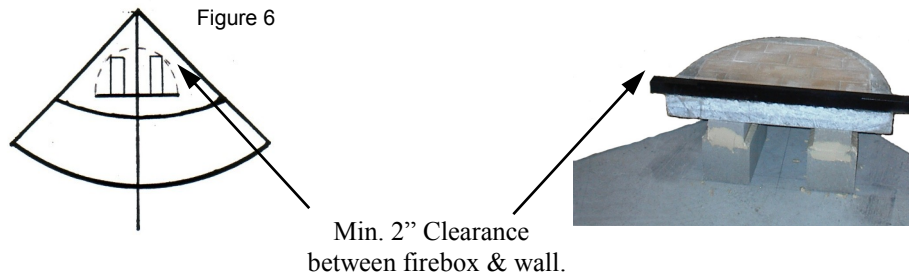
B. BASE PEDESTAL PREPARATION

Assemble two columns of blocks by placing one 8"x8"x16" and one 4"x8"x16" (blocks, not provided) on the bottom section front line, 3" away from centerline as illustrated in Figure 5. Mortar or adhere blocks together and to the floor. If a frame is not being used, the base may be set at desired height using alternate block size combinations.



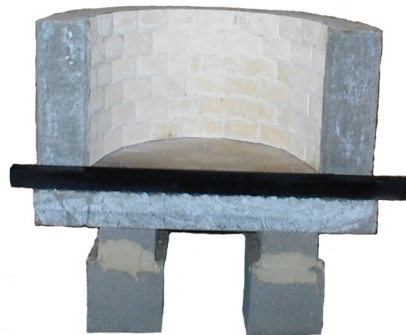
C. BOTTOM SECTION INSTALLATION

Spread a thin coat of high temperature refractory mortar (provided) to the top of the pedestal blocks. Set the bottom section on top of blocks and line the front up with the bottom section front line drawn on the floor. The clearance between the sides/back of the firebox to the side/back wall should be at a minimum of 2". See Figure 6.). Repeat on other side. Level section and realign to the front of the bottom section front line.



D. CENTER SECTION INSTALLATION

Place center section on top of the bottom section. Draw a line on the interior of the bottom section along the brick curve, outlining the curve. Remove the center section and spread refractory mortar 1" behind the line drawn on the bottom section. Reset the center section, press into position, and align with the back and sides of the bottom section. Spread a thin coat of mortar on the outside edge, or seam, to seal the two pieces together where they connect. Remove any excess refractory mortar or add mortar as needed to fill voids.



E. TOP SECTION INSTALLATION

Spread the refractory mortar to the top of the center section, and then follow the same procedure as the center section required. Including applying mortar to the outside seam.



**WARNING DO NOT PACK REQUIRED AIR SPACE
WITH INSULATION OR OTHER MATERIALS.**

III. COMBUSTABLE AIR SYSTEM: MUST BE INSTALLED

Your accessory kit includes an outside combustion duct Part #OAK vent (Figure 7).

Installation of the combustion air system can be installed at the same time as the roof flashing.

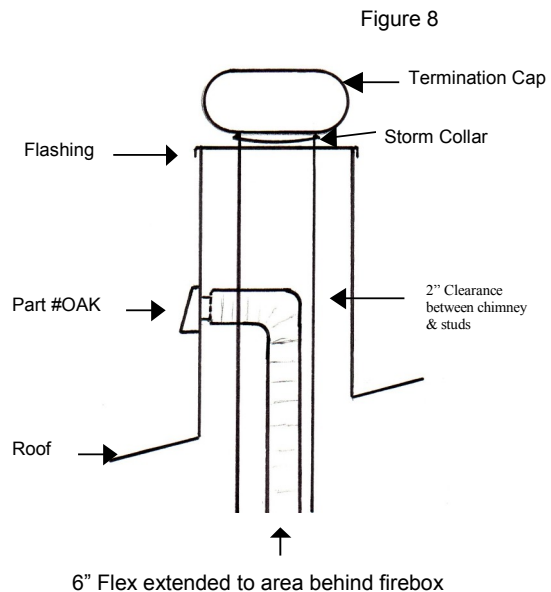
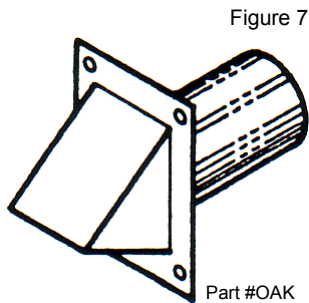
The function of this installation is to provide an additional oxygen source to the firebox and air cooled chimney. If the firebox shares an exterior wall (where the vent can be placed directly out the wall), proceed to paragraph A for installation procedures. If the firebox does not have exterior wall access, proceed to paragraph B for installation procedures. The combustion air system cannot terminate in attic space.

A. EXTERIOR WALL INSTALLATION

The air vent (part #OAK) should be placed at least 12" above the floor on the exterior wall. If both walls have outside access, either may be used. **The air vent must be placed with in the frame area.** Using the sleeve of the vent as a template, draw a 6" circle on the wall, cut out the circle, and insert the vent. Secure the outside of the vent to the wall using (4) #8 x 1 1/2" hex head self-drilling screws.

B. INTERIOR WALL INSTALLATION (Figure 8)

If an exterior wall is not available, the air vent must be installed on the outside of the chimney chase, between the roof and the flashing, using 6" flex aluminum duct (not provided) down to the firebox area. Using the sleeve of the air vent as a template, draw a 6" circle on the chase, cut out the circle, and insert the vent. Secure the outside of the vent to the chase using (4) #8 x 1 1/2" hex head self-drilling screws. Inside the chase, attach the 6" flex aluminum duct to the air vent sleeve, secure with screws, and stretch flex vent along chimney pipe run down to the area directly behind the firebox. See Page 7 for minimum chase dimensions.



IV. CHIMNEY INSTALLATION PROCEDURES

Use **ONLY** the following approved 8" wood burning double wall chimney systems.

	FMI - 8DM	Heatilator - SL300	Firecraft -FTF
Chimney Starter	20562	22070	1011881
30 Degree Elbows	30-8DM	SL330	FTF8ES30
12" Chimney	12-8DM	SL312	FTF8-12
18" Chimney	18-8DM	SL318	FTF8-18
24" Chimney	24-8DM	SL324	
36" Chimney	36-8DM	SL336	FTF8-36
48" Chimney	48-8DM	SL348	FTF8-48
Firestop	FS-8DM	FS338	FTF8-FS
Flashing	6F-8DM	RF370	FTF8-F6
Storm collar	SC-8DM	TR344	FTFC8-SC
Rain Cap/Termination	RT-8DM	TR344	FTF8-CTD

Components must be installed according to the manufacturer's specifications, using all necessary parts required by the manufacturer to complete the chimney run. A manufacturer's components are not compatible with another manufacturer's components (example: you cannot use a Heatilator termination cap with FMI chimney pipe).

A. CHIMNEY CLEARANCES

A 2" minimum clearance is required from any combustibles for all chimney. If a chase is to be constructed it must maintain 2" clearance to combustible materials. A minimum opening of 17" x 17" is necessary. When installing on an interior wall a minimum opening of 24" x 17" for the chase is required. This space will accommodate the *required* outside combustion air inlet through the chase. The chase construction needs to be 24" above the roof height, parapet wall, or roof peak. The appropriate roof flashing should be secured to the top of the chase.

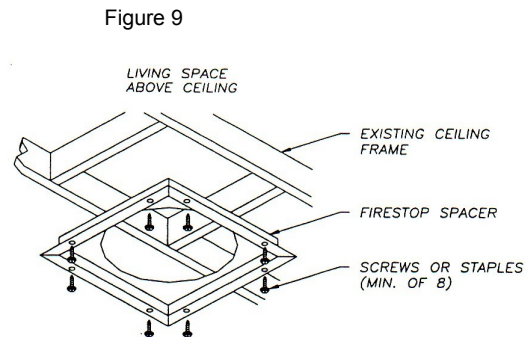
Note: Any roof or floor decking should not cover any of the chase opening.

Existing Structure Installation

In an existing house locate the ceiling joists using a stud finder. The proper 2" clearances must be maintained. If a joist is encountered within this space check local building codes before proceeding. **Check before cutting!**

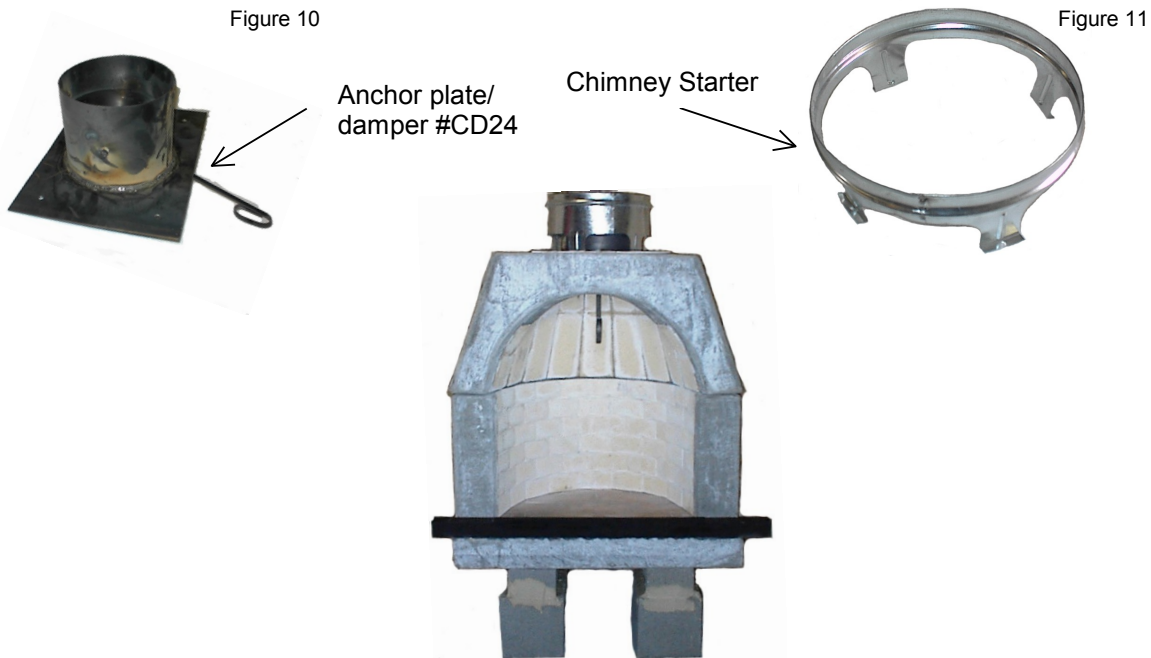
B. FIRESTOP SPACERS

Firestop spacers are required at each point where the chimney penetrates a floor or ceiling joist space. Their purpose is to establish and maintain the required clearance between the chimney and combustible materials, and provide separation from one floor space to another. When the double wall pipe passes through a framed opening into an attic space, the firestop must be placed into the attic floor. When the pipe passes through a framed opening into a living space above, the firestop must be placed onto the ceiling from below. See Figure 9.



C. CHIMNEY ASSEMBLY

1. Place the anchor plate/damper (Part #CD24; Figure 10) over the opening on the top section of the firebox with the damper handle down through the firebox opening. Place the chimney starter collar (Figure 11) over the anchor plate/damper. Centering over the opening, use a 1/4" masonry drill to drill directly into the firebox top through the 4 holes in the damper plate. Apply refractory mortar between anchor plate/damper and top section of firebox. Secure the plate with the 4 lag bolts 1/4" dia. x 1 1/2" long (provided).



WARNING: THE OPENINGS IN THE COLLAR AROUND THE FIREPLACE MUST NOT BE OBSTRUCTED. NEVER USE BLOWN INSULATION TO FILL THE CHIMNEY ENCLOSURE.

NOTE: Each double wall chimney section consists of an outer pipe galvanized, a stainless steel inner pipe, and a wire spacer. The pipe sections must be assembled individually as the chimney is installed. When starting the chimney, the inner flue pipe section must be installed first, with the lanced side up. The outer pipe section can then be installed over the flue pipe section with the hemmed end up. See Figure 12.

2. Place the inner section of the "offset" elbow (section without straps - See Figure 13) lanced side up into the damper and slide down in until hem seats. The outer section can now be installed. Press down on outer section until the lances on the lower end securely engage and snap into the fireplace-starting collar. The wire spacer will assure the proper spacing between the inner and outer pipe sections. Secure the chimney starter to the anchor plate with self-tapping screws (provided). It will be easier if the anchor plate is pre-drilled. **Additional information on elbow (offset & return) installation is available on page 10, Section D — Please read before proceeding.**
3. Continue with additional chimney sections until the "return" elbow (strapped section), when attached, will align with the hole previously cut into the ceiling for termination. When using the Southwest Kiva frame, an 18" section of pipe should be used between the "offset" and "return" elbow.
4. Attach the strapped "return" elbow flue section to the chimney assembly. Be sure the "return" elbow is correctly connected to the flue section. Align the top elbow to the hole previously cut into the ceiling and securely nail the straps to the walls or rafters to hold it in place.

Figure 12

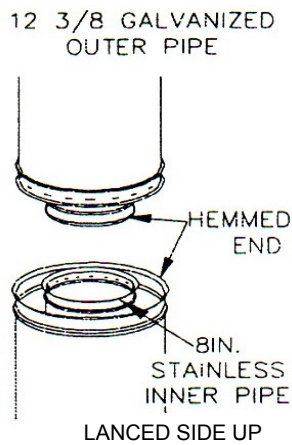
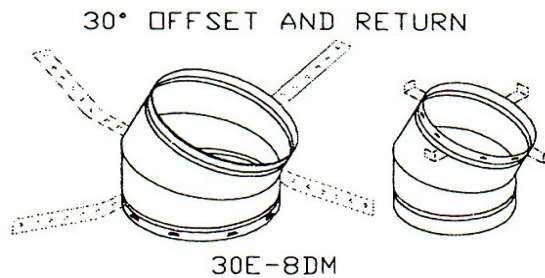


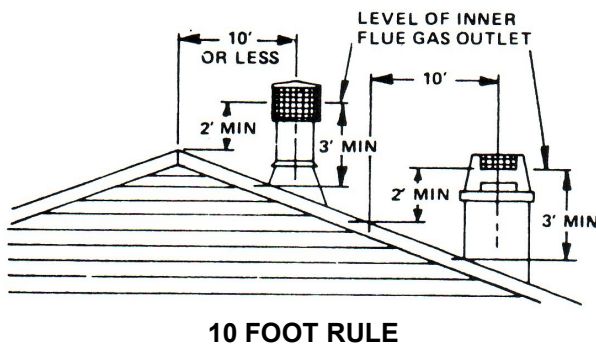
Figure 13



5. Continue the chimney sections necessary to reach the required height (see "10 Foot Rule", Figure 13). Each section should be secured together individually by first connecting the inner section, then the outer. Once the total flue required is in position, it is important to insure the connections between the chimney sections are locked. Also make sure the 2" clearances to combustibles is maintained. Securing the chimney with screws is not necessary unless two or more sections of pipe are placed together between elbows (See Figure 16).
6. Once the pipe run is complete, install the flashing (either secured to the roof or top of chase) over the protruding pipe. Next, install the storm collar around the exterior of the flue section extending above the roof flashing. Tighten and slide down over the top of the roof flashing, secure and seal. Install the termination cap as per manufacturer's instructions. See Figure, 14 & 15.



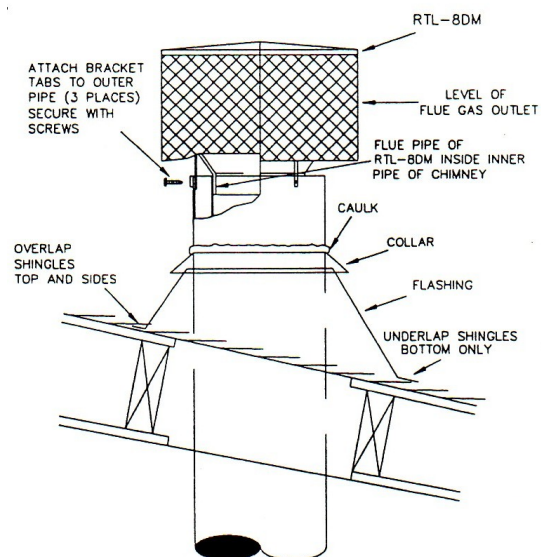
Figure 14



All chimney terminations must extend a minimum of 3 ft. in height above the highest point where it passes through the roof and must be at least 2 ft above the peak of the roof if within a horizontal distance of 10 feet from the peak.

Figure 15

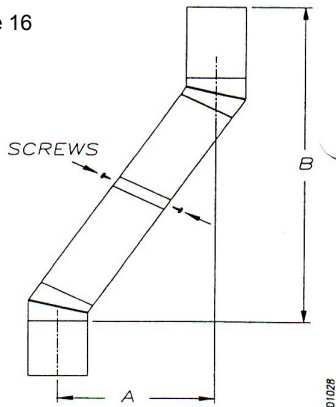
ROOF TOP TERMINATION (no chase)



D. ADDITIONAL ELBOW (OFFSET & RETURN) INFORMATION

1. To achieve desired offset you may install combinations of 12", 18", 24", 36" and 48" lengths of double wall pipe. See Chart B for rise information.
2. Chimney weight above offset rests on the return elbow. Straps must be securely nailed to rafters, joists or studs.
3. Maximum lengths of pipe between supports (return elbow or 12S -8DM) is 6' of angled run. Maximum of two 6' angled run sections per chimney system.

Figure 16



All joints (where two pipes are joined) should be secured with two screws, only on the outer pipe, and shall not penetrate the inner stainless.

CAUTION:

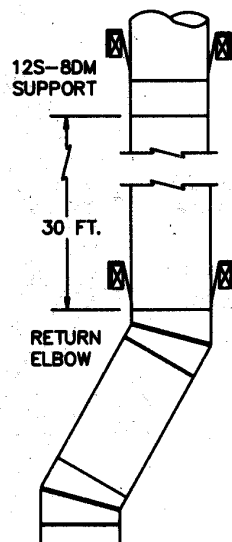
Install only the terminations outlined in these instructions. A serious fire hazard could exist if using non -listed termination. This chimney system is not intended for wall termination.

Chart B

OFFSET CHART (22-50 FT. SYSTEM HEIGHT)

OFFSET	RISE	CHIMNEY LENGTH				
		48"	36"	24"	18"	12"
4 - 3/8	16 - 3/8	ELBOW SET ONLY				
9 - 3/4	25 - 1/2					1
12 - 3/4	30 - 3/4				1	
15	34 - 3/4			1		
18	40				1	1
21 - 1/4	46 - 1/4		1			
23 - 3/4	49 - 1/4			1	1	
27 - 3/4	56 - 3/4	1				
30	60 - 3/4		1		1	
33	66	1				
36	71	1			1	
38 - 1/4	75		2			
41 - 1/4	80 - 1/4		1		1	1
45	86 - 3/4		2			
46 - 3/4	89 - 1/2	1			1	1
51	97	1	1			
53 - 1/4	101		2		1	
56 - 1/4	106 - 1/4	2				
59 - 1/4	111 - 1/2	1	1		1	
61 - 3/4	115 - 1/2	2				1
64 - 3/4	120 - 3/4	2			1	
68 - 1/4	127	1	2			
70	130	2			1	1
74 - 1/4	137 - 1/2	1	2			1
76 - 3/4	141 - 1/2	1	2		1	
79 - 3/4	146 - 3/4		4			

Figure 17



THE FIREBOX MUST BE INSTALLED USING THE SOUTHWEST KIVA FIREBOX METAL FRAME OR LIKE NON-COMBUSTABLE MATERIALS. CLEARANCES TO COMBUSTIBLES AND FRAMING MUST BE MAINTAINED AT ALL TIMES.

V. FRAME INSTALLATION

Metal diamond mesh (not provided) needs to be cut to cover the entire opening of the firebox and screwed in place with the #8 washer head screws (provided). The screws should be placed every 3" inches apart and screwed into the concrete portion of the firebox. Do not screw into the refractory bricks. After screws are in place, cut the mesh as indicated in Figure 18. Place the frame/cage in front of the firebox (frame opening should be recessed into the firebox opening approximately 1/2") as in Figure 19. Pull cut section through the door/arch opening and wrap around the front of the frame. Secured to the frame with #6 x 1/2" self-drilling screws. Attach another piece of metal lath 28" x 24" (folded in half) to the face of the combustible air tube with #6 x 1/2" self drilling screws. Once in place the mesh should be folded down on top of the hearth/banco, This mesh is also screwed to the frame with #6 x 1/2" self-drilling screws when the fireplace frame is installed.

Secure the frame to the wall.

The lath extends about 6" beyond the frame. Secure the frame to the wall by screwing #8 washer head screws through the extra lath into the wall every 4".

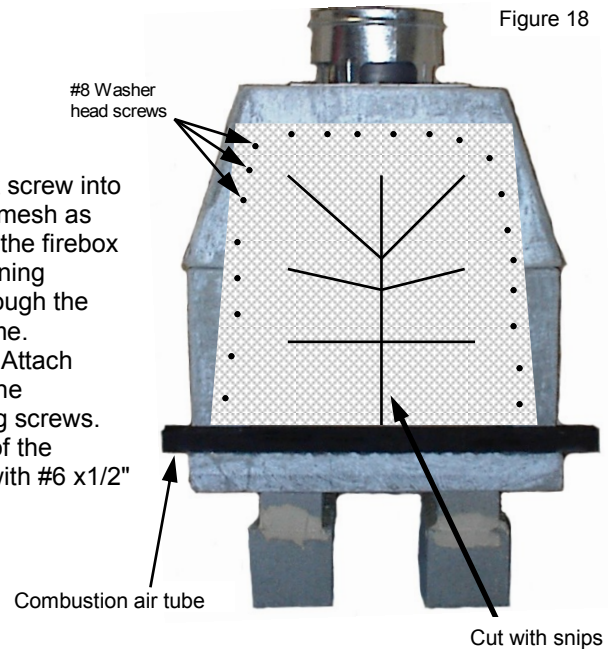
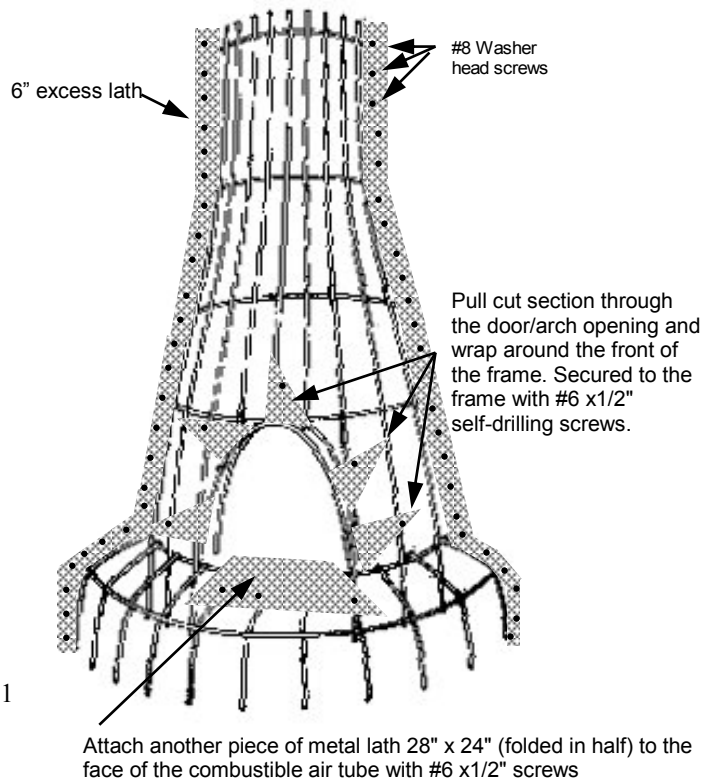


Figure 19

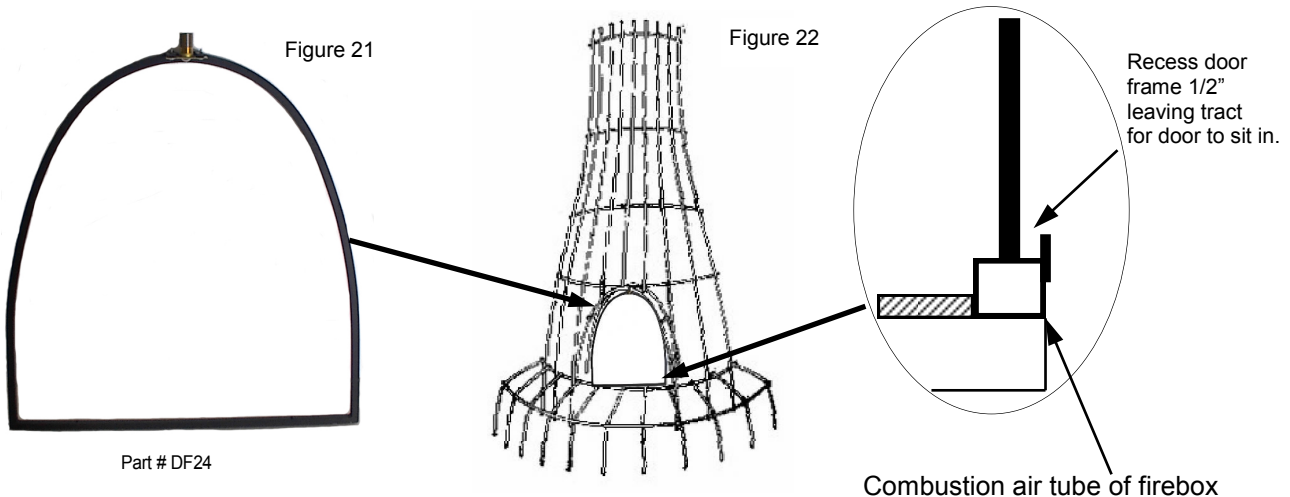


Figure 20



VI. DOOR FRAME INSTALLATION

The steel Southwest Kiva arched doorframe Part # DF24 (figures 21 & 22) is included in the accessory kit. The doorframe is attached after the frame installation is complete, but prior to plaster application. Set the base of the doorframe on top of the combustion air tube. Align the holes in the base of the doorframe with the two pilot holes in the air combustion tube, and loosely attach with screws provided. Align the doorframe with the firebox opening and tighten screws. After the doorframe is in the proper position, push the butterfly bolt through the frame mesh and tighten. If mesh is obstructing installation, make a hole in the mesh large enough to allow the latch to be mounted. When the plaster is applied to the frame, the plaster around the doorframe opening should be filled up to the outside edge of the frame. If it is overfilled it will obstruct the door and not allow the door to fix. The latch can be raised or lowered for proper fit of optional screen or glass door.



VII. FINISHING/PLASTERING THE FIREPLACE

First plaster the interior of the kiva opening arch with a mortar mix of 1 part Portland cement, 1/2 part lime, 3 parts Vermiculite, 1/2 cup (by vol.) of shredded fiberglass. Limit water to only an amount to make mixture workable.

Use a standard 3-coat plaster process 1) Scratch base coat, 2) Brown coat, and 3) Finish coat. Cover the entire frame with any interior plasters. Check local plaster supplier or hardware store for interior plaster. Mix and apply according to installation on package.

VIII. GAS PIPE INSTALLATION

Installation of gas pipe is intended for connection to a decorative gas appliance that incorporates an automatic shutoff device and complies with the Standard for Decorative Gas Appliances for Installation in Vented Fireplaces, ANSI Z21.60. The decorative gas appliance must be installed in accordance with the National Fuel Gas Code, ANSI Z223.1

CAUTION: WHEN USING THE DECORATIVE GAS APPLIANCE, THE FIREPLACE DAMPER MUST BE PERMANENTLY REMOVED OR LOCKED IN THE OPEN POSITION.

FOLLOW THE INSTALLATION MANUAL PROVIDED BY THE CERAMIC GAS LOG MANUFACTURER

GAS LINE INSTALLATION

GAS LINE HOOK-UP SHOULD BE DONE BY YOUR GAS SUPPLIER OR A QUALIFIED SERVICE PERSON.

NOTE: BEFORE YOU PROCEED, BE SURE YOUR GAS SUPPLY IS OFF!

A gas line may be installed for use with a **decorative gas appliance**, available through your local distributor. Use only **1/2-inch** black iron pipe and appropriate fittings. When installing a gas line, a shut-off valve designed for installation outside the fireplace is recommended.

Installation procedure:

1. Remove the knockout indentation on the refractory (or firebrick) wall, located approximately 2 inches above the refractory hearth floor. To remove, pry knockout (inside fireplace) with a chisel, screwdriver or sharp object until knockout is re-leased. Use 3/4 " masonry drill bit to remove remaining firebrick. Remove fragmented portion of refractory.
2. Remove gas line cover plane on right- or left- hand side of fireplace (depending on which way incoming gas line is routed to the fireplace). Pull out insulation from gas line sleeve.
3. Run a 1/2-inch NPT black iron gas line into the fireplace 8 1/2 inches from the floor, and route into the fire chamber through the gas line sleeve. (If using a raised platform, add height of platform to specified 8 1/2 inches.) Provide sufficient gas line into fireplace chamber for fitting connection.



NOTE: Secure incoming gas line to wood framing to provide rigidity for threaded end.

4. Pack insulation around gas line and into sleeve openings. Seal any gaps between gas line and refractory knockout hole with refractory cement or commercial furnace cement. Either install decorative gas appliance (per instructions included with appliance) or cap off gas line.

CAUTION: All gas piping and connections must be tested for leaks after installation is complete.

With gas turned ON, apply a soap and water solution to all connections and joints. If bubbles appear, leaks can be detected and corrected.

DO NOT USE AN OPEN FLAME FOR LEAK TESTING. DO NOT OPERATE ANY APPLIANCE IF A LEAK IS DETECTED.

The gas pipe is only intended for connection to a decorative gas appliance that 1) incorporates an automatic shut-off device, and 2) complies with the **Standard for decorative gas appliances for Installation in Vented Fireplaces, ANSI Z21.60-1 990**. The gas pipe must be installed in accordance with the **National Fuel Gas code, ANSI Z223.1-1992**.

“CAUTION” WHEN USING THE DECORATIVE APPLIANCE, THE FIREPLACE DAMPER MUST BE SET IN THE FULLY OPEN POSITION

Parts List for Southwest KIVA Components

CHIMNEY PARTS FROM, FMI, Heatilator, Superior, and Temco

Firestop Spacer

Flashing

Chimney 12",18",24",36",48

Rain Cap

Storm Collar

30 Degree offset



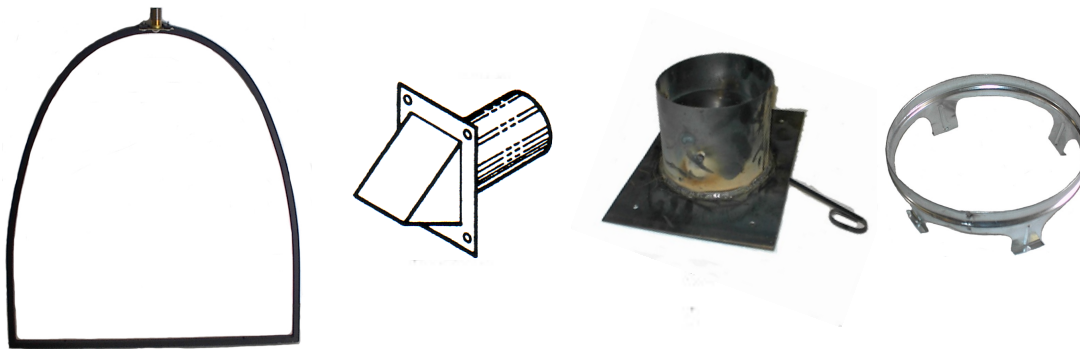
FIREPLACE ACCESSORIES

Door Frame Part #DF24

Outside Air #OAK24

Damper Plate #DP24

Chimney Starter



OPTIONS:



Screen Door
Part #SD24



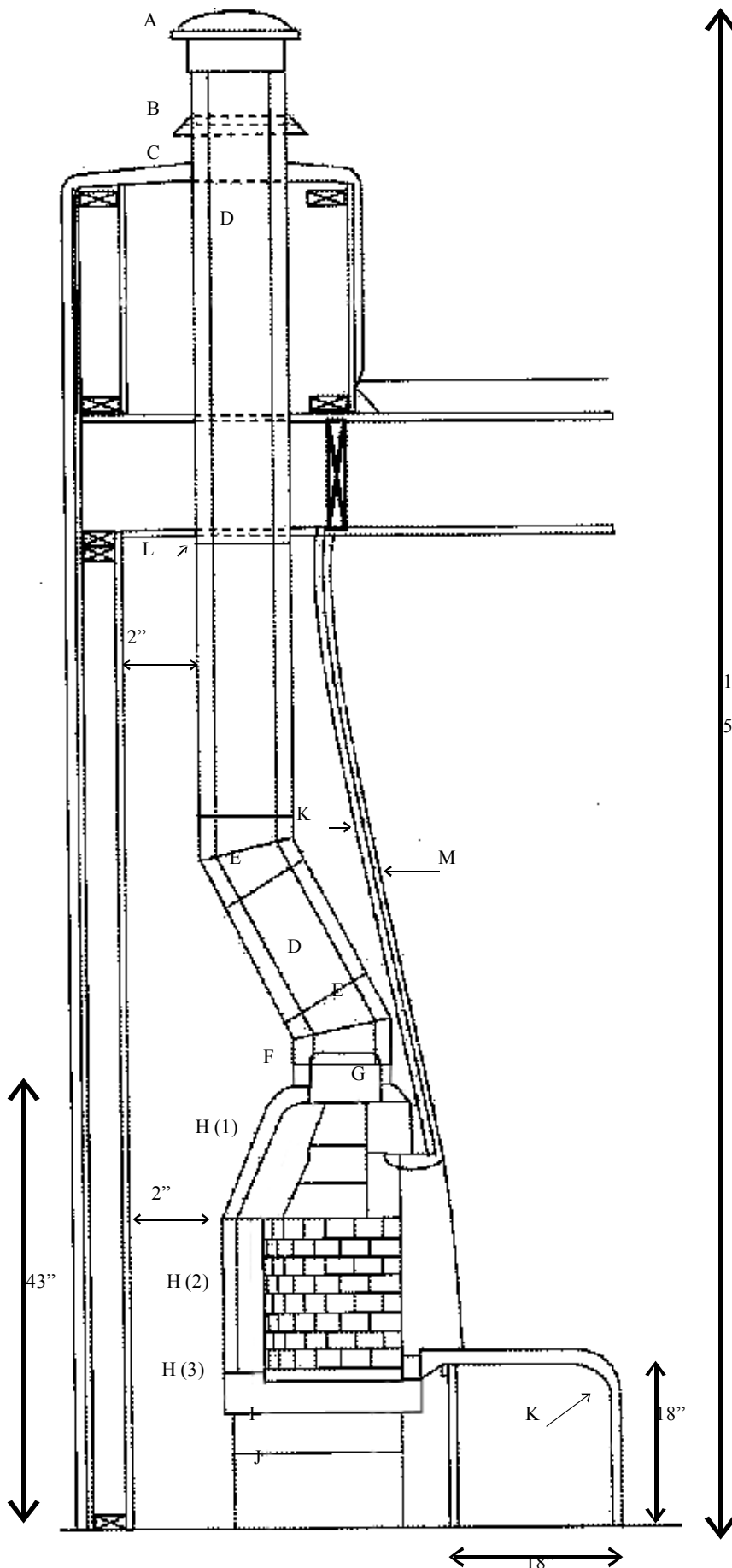
Grate
Part #GRA



Glass Door
Part # GD24

Southwest Kiva

Pre-fabricated
Kiva Fireplace



- A) Rain Cap
- B) Storm Collar
- C) Flashing
- D) Chimney
- E) 30 Degree Elbows
- F) Chimney Starter
- G) Damper
- H) (1) Firebox Top
(2) Firebox Center
(3) Firebox Bottom
- I) 4x8 CMU Block
- J) 8x8 CMU Block
- K) Steel Frame
- L) Firestop Spacer
- M) Plaster Finish

- Minimum height of chimney 11 1/2'.
- Maximum height of chimney 50'.
- Banco/Hearth 18" high x 18" wide.
- Height of firebox w/ blocks 43"
- Clearance of Firebox to combustible 2"
- Clearance of chimney to combustible 2"